

ENTRY  
APPROVED  
4/9 11-15-04  
IN THE CLAIMS

For the convenience of the Examiner, all pending claims of the present Application are shown below.

1. (Previously Presented) An optical processing device, comprising:  
an optical signal separator operable to direct a portion of an unmodulated optical signal for modulation;  
an array of variable blazed gratings located on one or more semiconductor substrates, the array of variable blazed gratings operable to receive the portion of unmodulated optical signal and to modulate that signal based at least in part on a control signal received from a controller; and  
one or more optical amplifiers capable of at least partially compensating for at least some of the losses associated with processing optical signals in the optical processing device.
2. (Previously Presented) The optical processing device of Claim 1, wherein the optical signal separator is selected from the group consisting of a beam splitter, a fiber optic tap, a demultiplexer, and a circulator.
3. (Previously Presented) The optical processing device of Claim 1, wherein the optical signal comprises a multiple wavelength optical signal and wherein at least some of the wavelengths comprise a different center wavelength.
4. (Previously Presented) The optical processing device of Claim 1, wherein the array of variable blazed gratings comprises:  
one or more inner conductive layers; and  
a plurality of approximately adjacent at least partially reflective mirrors disposed outwardly from the one or more inner conductive layers, each mirror operable to receive at least some of the portion of the unmodulated optical signal, wherein each of the plurality of mirrors is operable to undergo a partial rotation.
5. (Previously Presented) The optical processing device of Claim 4, wherein none of the mirrors has a width greater than 40 microns.